



DEPARTMENT OF PAEDIATRICS AND  
CHILD HEALTH  
POLOKWANE CAMPUS  
UNIVERSITY OF LIMPOPO

# FINAL REPORT

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SUPPORT FOR COMPREHENSIVE HIV PREVENTION,  
CARE AND TREATMENT FOR MOTHERS AND CHILDREN  
IN LIMPOPO: VHEMBE AND MOPANI DISTRICTS.  
AUGUST 2007 - OCTOBER 2008

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28 November 2008

## CONTENTS:

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Introduction and Background	3
Objectives, Outputs and Targets	5
Objective 1: Improved PMTCT at PHC facilities	6
Situation Assessment	6
Improvements and Innovations	8
PMTCT Outputs	10
Lessons learned and Recommendations	12
Objective 2: Improved Maternal HIV Care in Hospitals	13
Situation Assessment	13
Improvements and Innovations	14
Outputs	15
Lessons learned and Recommendations	17
Objective 3: Increasing number of children accessing HIV care	18
Situation Assessment	18
Improvements and Innovations	19
Outputs	20
Lessons learned and Recommendations	20
Objective 4: Coordination, liaison and advocacy with key stakeholders	21
Good news stories	23
Recommendations and Future Plans	24
Annexure 1: Data from PHC facilities Sep 07 – Aug 08	1
Annexure 2: Baseline data to establish ARV targets	3
Annexure 3: Hospital PMTCT and ARV data Oct 07 – Sep 08	4
Abbreviations :	
AZT	Azidothymidine
BANC	Basic Antenatal Care
IMCI	Integrated Management of Childhood Illness
PCR	Polymerase Chain Reaction
PMTCT	Prevention of Mother to Child Transmission
VCT	Voluntary Counselling and Testing

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## INTRODUCTION AND BACKGROUND:

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The PMTCT programme was initiated in two pilot sites in Limpopo Province in 2001. ARV care was introduced in 2005. All facilities in Limpopo provide PMTCT services and all hospitals and a few health centres, provide ARV care.

To achieve the “HIV & AIDS National Strategic Plan for 2007 – 2011” specific targets on PMTCT and the Special Needs of Pregnant women and children, additional support was required. Barriers and gaps need identifications and local solutions and innovations tested. The Department of Paediatrics and Child Health with support from DFID employed a small team of facilitators to provide onsite clinical and health systems support to facilities.

After consultation with the province, the team was based in Thohoyandou, and support was extended to the Vhembe District of Limpopo, as well as to Nkhensani Hospital in Mopani. Vhembe District with a population of 1,2 million people and HIV prevalence of 15% in pregnant women has 7 hospitals, and 104 primary health care facilities.

The Vhembe District Office identified 6 clinics for support. They were supported from September 2007 to September 2008. Later another 6 clinics were supported from the first quarter of 2008 to September 2008. Facilitators spent one day a week at each clinic. All 7 hospitals in Vhembe as well as Nkhensani hospital were visited. 6 hospitals accepted support and were regularly visited. Support for hospitals was provided from November 2007 – September 2008.

The ECHO project, a partnership with Wits Paediatric HIV Clinics provided similar support to parts of Capricorn, Sekhukhune and Waterberg Districts. The ECHO project provided clinical orientation for our facilitators and the two teams participated in bimonthly meetings to review progress and to update themselves on new developments and progress in the field.

The team was led by Dr Anne Robertson from the Department of Paediatrics and Child Health, and included Dr Givans Ateka, Project Manager, Dr Rendani Netshimboni, medical doctor, Ms Susan Ramatsea, Social Worker and Ms Malehu Makhura and Ms Florina Tsolo, Primary Health Care nurses.

The report covers the work of the consultants and the Department of Paediatrics and Child Health. Each key objective is discussed in detail, outlining the situation at the beginning, the improvements and innovations, the outputs and then lessons learned and recommendations.

The data used in the report is collected from the various registers and record books in the health facilities, and are based on similar data elements to the DHIS. The project is an intervention project and not a research project, and the data should be interpreted within these limitations.

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**OVERALL OBJECTIVE OF PROJECT:**

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The overall purpose of the consultancy is to ensure that hospitals and Primary Health Care facilities have the capacity to provide effective comprehensive HIV and AIDS prevention, care and treatment for pregnant women and children.

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**PROJECT OBJECTIVES:**

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The four key objectives were

1. Improved PMTCT uptake at PHC clinics through on-site clinical and health systems support.
2. An effective comprehensive HIV service for pregnant women in hospitals.
3. Effective HIV care and treatment of children in hospitals.
4. Coordination, advocacy and liaison with key stakeholders to facilitate identification, care and support for HIV positive pregnant women, mothers and children, in the community and health service.

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**OUTCOMES AND TARGETS:**

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For the health services in which we were facilitating care to

- Increase the HIV testing rates and thus access to care to more than 90% of pregnant women.
- Increase the access of HIV exposed infants to “early infant testing” and care to more than 60%.
- Initiate more than 40% of HIV positive pregnant women currently eligible for HAART, onto care while they are still pregnant.
- More than double the number of children currently on ARV treatment in ARV sites. (Target for the 6 hospitals – 230 new children on care)
- Efficiently manage and organise clinical and health system tasks.

For the team to

- Re-orientate and change the way health workers perceive and manage pregnant women, mothers and children affected by HIV.
- Liaise with key stakeholders to facilitate improved implementation, support and where necessary policy development.

# OBJECTIVE 1: IMPROVED PMTCT AT PHC FACILITIES

The outputs include

- Change in way health workers perceive and manage mothers and children affected by HIV
- Efficient organization of HIV tasks
- Ensuring that more than 90% of pregnant women are tested for HIV and received PMTCT and that more than 60% of HIV exposed infants' access early infant testing HIV DNA PCR testing.

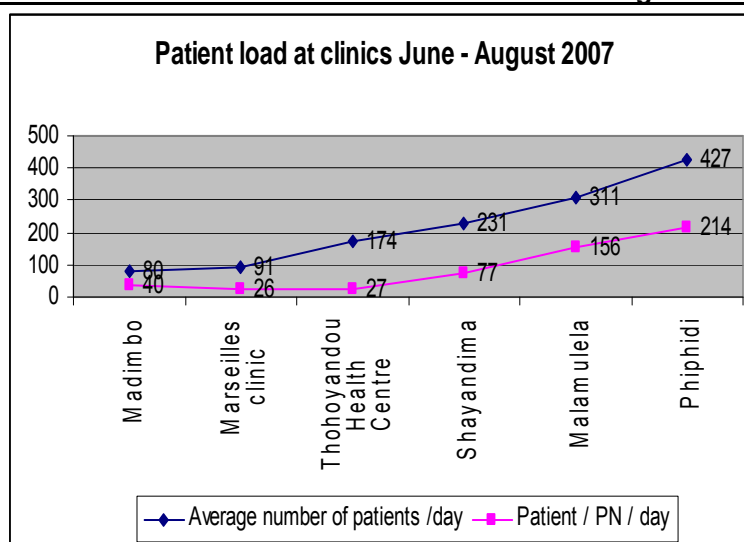
## SITUATION ASSESSMENT

A baseline assessment and process mapping was done in 6 clinics, Madimbo, Phiphidi, Shayandima, Thohoyandou, Marseilles and Malamulela. Baseline data was collected from June – August 2007. Ongoing PMTCT data was collected each month from the initial 6 clinics from September 2007 to August 2008 and from the additional 6 clinics from some time in the first quarter to the end of August. (See annexure 1) The data was collected from the various registers and books in the facilities.

## STAFFING AND FACILITIES

The clinics were busy, the average number of clients consulted from Monday – Sunday ranged from 80 – 427, each professional nurse consulted between 26 and 214 clients a day. 86% of the professional nurses were IMCI trained, but only 60% trained in VCT and PMTCT.

**Table 1: Average Patient Load at Pilot Clinics between June and August 2007**



## COUNSELING AND TESTING

Patients attended antenatal clinic on any day, but some days were busier. After consulting the professional nurse, the client was referred to a lay counsellor for HIV counselling and testing. The counsellor interpreted documented and coded the HIV test result. The professional nurse assisted with the finger prick blood specimen. The HIV testing acceptance rate was 92%. There was an over-emphasis on confidentiality to the extent that some lay counsellors practiced secrecy. There was no retesting of pregnant women later in pregnancy. If the client had a positive test the counsellor sent the client to the enrolled nurse

to take a blood specimen for a CD4 count. There was no separate record on CD4 tests taken on pregnant women.

#### ***KNOWLEDGE, PERCEPTIONS AND ATTITUDES OF HEALTH CARE PROVIDERS***

Knowledge, perceptions and attitude toward aspects of the service were a problem. These may have their root cause in the mixed messages both in the health service and the media. Staff also feared disciplinary action and litigation. Some of the misperceptions included

- Belief by counsellors and nurses that HIV tests results were secret and were not to be documented in official records. Some health workers kept PMTCT registers locked up in their homes so that no one else in the clinic could access the information.
- Lack of knowledge on the importance of taking a CD4 test, getting the result, and acting on the findings in pregnant women. The perception was that HAART for pregnant women was harmful to the foetus, and Nevirapine alone was adequate.
- Failure to realise that follow up of HIV exposed infants and mothers was part of the PMTCT package, and included performing and intervening on the results of HIV DNA PCR tests.
- Reluctance of professional nurses not trained in PMTCT and VCT to provide any aspect of the HIV service as they were not trained and “not covered”. There is clearly no overview of guidelines and sharing of information after training. This applied to 40% of the professional nurses. Even nurses who had been trained were reluctant to do PCR test (essentially taking a drop of blood) if they had not done a 3 day update in PMTCT.

#### ***CHILD HEALTH SERVICES***

Child Health Services were provided by the Enrolled Nurse in the clinic. This was contrary to provincial policy but a reasonable practice given the workload of the Professional nurses. Enrolled nurses were not trained in IMCI, PMTCT or VCT, making identification of exposed babies at 6 weeks challenging. There was a record of only ONE PCR done in all the 6 clinics in the preceding 3 months and no record of cotrimoxazole having been dispensed according to the policy at 6 weeks for HIV exposed infants.

#### ***DATA MANAGEMENT***

Data was collecting in a number of registers and books, and then collated at the end of the month, usually by the sister in charge of the clinic. It was noted to be a time consuming job, taking the sister in charge of the clinic away from clinical consultation time. Data came from the following sources.

- Antenatal visits in the “Tick Register”
- Counsellors register for VCT and CD4 counts
- NVP in a black book or register
- CD4 count in the counsellors register or black book
- PCR in a black book
- CD4 and blood results in a pile with all results
- PMTCT registers in some facilities, held by individual professional nurses

None of the data collection tools allow the health service to track a patient and follow them up should an important result come back, or should they fail to come back for a fixed appointment.

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## IMPROVEMENTS AND INNOVATIONS

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Through a process of on-site support, with clinical mentoring of all categories of health workers, assistance with health systems organisation and management, and discussion of solutions to problems at regular clinic meeting, team members were able to facilitate change in many areas of the service. An important forum to liaise and discuss referrals was the monthly peri-natal review meeting held with each district hospital and the surrounding clinics.

### *HEALTH SYSTEM IMPROVEMENTS IN THE CLINIC*

#### **Patient flow and Task Shifting**

Better patient flow and task shifting resulted in a more efficient and integrated service. Where necessary health workers were trained on site.

- Lay counsellors counselled pregnant women before they were consulted by the Professional nurse for Antenatal Care.
- The Professional Nurse then performed the HIV test, and took responsibility for further case management, including infant feeding counselling, CD4 testing, referral, treatment and follow up.
- Lay counsellors and enrolled nurses assisted in this role, and also helped trace patients but were no longer the case managers.
- Care givers of infants coming to the clinic for their 6 week check were interviewed by the lay counsellors so that that HIV exposed infants were identified and PCR testing and cotrimoxazole treatment initiated.
- Enrolled nurses assisted professional nurses in performing the PCR tests.
- Lay counsellors, enrolled nurses, and community carers, assisted with counselling, tracing patients and forming support groups.

#### **Antenatal Care Register and Organisation of results.**

- An antenatal care register incorporating BANC (Basic Antenatal Care) and PMTCT was developed and piloted in the clinics. The importance of this register is that it is not just for HIV positive women, it is not secret and should replace the use of the tick register for antenatal care and other “black” books. It will also facilitate follow up, monitoring and audit.
- CD4 counts on pregnant women were identified and the CD4 and PCR results were organised in a file. A system of calling patients by mobile phone to collect results was developed. This worked well for patients with mobile phone access.

#### **Revised PMTCT policy**

- Implementation on the revised policy on PMTCT began in April 2008, although AZT was available in clinics only from August. The team spent time updating staff on the revised policy, referring patients to hospital for AZT, until AZT was available at clinics, and assisting in ensuring ordering and supply of AZT to clinics.
- A PMTCT protocol was developed to assist health workers in implementing the revised PMTCT policy. This was piloted in the clinics.

By the end of August 2008 all clinics in which we worked had supplies of AZT tablets and were implementing the revised policy.

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## PMTCT OUTPUTS

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### *VCT UPTAKE IN PREGNANT WOMAN*

The overall uptake of HIV testing in the clinics during the period of our support was 93% for the initial 6 clinics and 82% for the additional 6 clinics. This ranged between 66% and 100%. There is evidence that the HIV testing rates increased to over 90% for all 12 health facilities by August 2008.

Of all the pregnant women tested 13% were positive, which is consistent with provincial and antenatal data.

### *CD4 TESTING AND REFERRAL FOR ARV TREATMENT IN THE HOSPITAL*

Specimens for CD4 tests were taken on 92% of the positive pregnant women in the 12 clinics. 34% (176) had a CD4 count below 350 and 39% (69) of women with low CD4 counts were referred for HAART. We were not able to establish how many accessed HAART.

### *NEVIRAPINE AND AZT ADMINISTRATION*

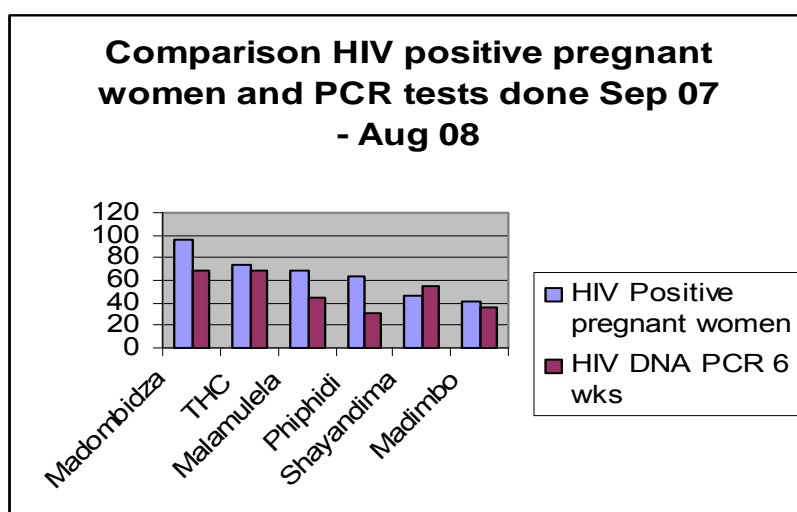
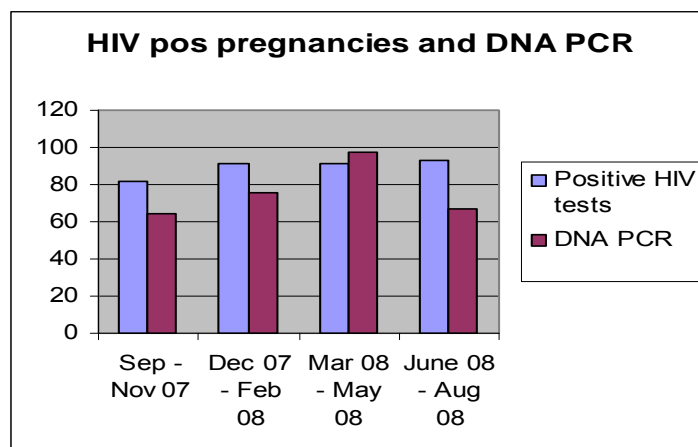
51% of HIV positive pregnant women in the 12 clinics were recorded as being given Nevirapine tablets at 28 weeks to take when going into labour. In the revised PMTCT policy Nevirapine is not dispensed until the woman is in labour. AZT is dispensed from 28 weeks on. The antenatal care register has data elements for the doses of AZT administered, and will in future be monitored at Primary Health Care Clinics.

### *HIV DNA PCR TESTING AND OUTCOMES*

Prior to the intervention only one HIV DNA PCR test was taken. There was an immediate increase in the number of HIV DNA PCR tests taken on infants at 6 weeks. To determine how many HIV DNA PCR tests should be done, we compared the number of PCR tests done with the number of HIV positive pregnant women attending antenatal care over the same period. (The usual smaller denominator would be infants born to HIV positive mothers, (but as most women deliver in hospital it was not possible to use this in a PHC clinic setting) In the 12 clinics the HIV DNA PCR testing rate was 0.89. The following two graphs illustrate the number of HIV DNA PCR tests in infants and HIV positive tests in pregnant women from each quarter of the initial 6 clinics and then testing rate for each clinic.

The immediate uptake and even overshooting in the 3<sup>rd</sup> quarter is probably the result on some infants older than 6 weeks being tested as they were not previously tested. The results of the HIV DNA PCR tests took 2 – 8 weeks to be returned.

**Figure 2 and 3: HIV DNA PCR testing and HIV positive pregnancies in 6 Vhembe clinics from Sep 07 – August 08.**



**HIV TRANSMISSION TO INFANTS**

Results for just over half of the PCR tests were available, 9% were positive. During the same period 278 rapid tests were done on children > 12 months. 36 (13%) were positive.

The transmission rate recorded in the 12 clinics was lower than that reported in the DHIS for Vhembe district in 2007. (See Annexure 4) In the DHIS statistics 10% of the HIV DNA PCR tests were positive at 6 weeks and 21% of the HIV tests done at > 12 months were positive. The additional transmission at 12 months is a concern as it probably represents transmission through breastfeeding. The addition of AZT to the PMTCT regimen is unlikely to have any effect on this transmission. This places more responsibility on us to ensure that pregnant women who have low CD4 counts are placed on HAART, as they will be less likely to transmit the virus through breast milk if their viral load is suppressed.

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**LESSONS LEARNED AND RECOMENDATIONS**

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A number of lessons were learned in the project that need to be taken forward to other sites, or there is a need for further work in these areas.

- Health workers who were initially demotivated are now working enthusiastically as a team to implement comprehensive care for mothers and children. They network with the community, follow up patients and are taking responsibility for the service.
- Communication around revisions to protocols, and policies need to be made clearly and concisely to all health workers, and clinical supervisors must ensure that these are clearly understood and implemented.

- Communication between PHC facilities and hospitals need to be strengthened to facilitate consistent protocols and effective referrals, collection of results and supplies.
- HAART initiated at Primary Health Care clinics will result in easier access and more comprehensive care for mothers and children. However in order for this to happen attention and resources need to be diverted to staffing and facilities at primary health care level.

## OBJECTIVE 2: IMPROVED MATERNAL HIV CARE IN HOSPITALS

One of the key outputs of the project was to ensure that pregnant women eligible for HAART were initiated on HAART. We initially set a target of 60 pregnant women to be initiated on HAART, but became more aware of the importance HAART in pregnancy and we decided to try and see if 40% of pregnant women eligible for HAART ( CD4% < 200 – estimated to be about 20% of HIV positive pregnant women) could be initiated on HAART. Targets were set for a one year period for each hospital based on the number of deliveries.

Table 2: Target for HIV positive pregnant women to be initiated on HAART Oct 07 – Sep 08

HOSPITAL	EXPECTED DELIVERIES	ACTUAL DELIVERIES OCT 07 - AUG 08	EXPECTED NUMBER WHO ARE HIV POSITIVE (10%)	EXPECTED NUMBER ELIGIBLE FOR HAART (20%)	TARGET (40% OF ELIGIBLE)	ACTUAL NUMBER ON TREATMENT
Malamulele	4000	2939	400	80	32	17
Tshilidzini	5000	4594	500	100	40	31
Elim	3300	3086	330	67	27	21*
Siloam	2500	2319	250	50	20	9
Makhado	1342	1208	134	27	11	16
Nkhensani	3600	3238	360	72	29	25
					158	119

Source: Hospital ARV information officers and for Elim Hospital Provincial Pharmaceutical ARV Data

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### SITUATION ASSESSMENT

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The assessment of services for HIV pregnant women in hospitals showed

- High risk antenatal clinics were run once a week in hospital. Patients with high risk pregnancies, and medical problems such as hypertension and diabetes were referred to high risk antenatal clinics for antenatal care. Despite the fact that the majority of maternal deaths are due to HIV, HIV status or HIV severity was not considered as a risk factor for referral. The clinics were staffed by the obstetric doctor, and maternity ward staff.
- Where the HIV status was not documented or coded, HIV counselling and testing was offered in the high risk clinic, labour ward and in postnatal ward. The result was coded.
- The obstetric doctor did not usually know the HIV status of the patient, as this was coded even in the hospital confidential record.
- The obstetric doctors were very eager to initiate pregnant women on HAART, but requested training and support from the ARV clinic.
- The ARV clinics were referred pregnant women who had low CD4 counts for initiation on HAART. They seemed at times reluctant to initiate them on HAART, and were often rigidly conforming to three adherence visits, one month apart. There was a lack of knowledge of the special situation of pregnant women and the urgent attention they require. There was concern again expressed that ART may be toxic to the foetus.

- ARV clinics kept no record of pregnant women initiated on HAART so it was not possible to establish how many pregnant women had commenced HAART.
- Patients presenting to labour ward had their HIV status decoded from the Antenatal card and documented in the Maternity register.

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### IMPROVEMENTS AND INNOVATIONS

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- The importance of Integrating maternal HIV and ARV care at high risk antenatal clinics was emphasised and advocated to hospital clinicians and management. (The Primary Health Care clinics where all antenatal care is done are not yet initiated patients on HAART, but when this is in place it may be the preferred site for uncomplicated patients)
- A two day training programme on HIV management was developed for maternity and obstetric staff. Two training courses were run for Vhembe and Mopani districts in June 2008. The training was very well received.
- A Submission was made to the provincial department of health to change the system of PMTCT coding and the recording of HIV results in official patient records.

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### OUTPUTS

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Data from each hospital was collected each month. The staff obtained the information from the maternity register and the maternity PMTCT register, the antenatal clinic register, and the ARV clinic register. Data was collected from October 2007 – August 2008.

#### *LABOUR WARD*

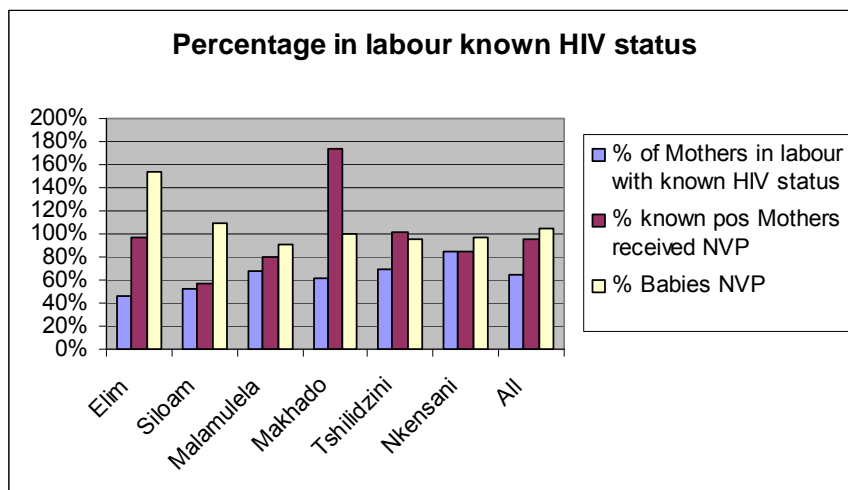
Table 3 and Figure 4 show the percentage of women admitted to labour ward whose HIV status was documented in the Maternity register. This ranged between 47% at Elim and 85% at Nkhensani hospitals.

When we used this information as a denominator 96% of known HIV positive pregnant women received Nevirapine in labour and 104% of their infants received Nevirapine in postnatal ward. More patients were presumably identified as HIV positive in postnatal ward.

Table 3: Percentage of pregnant women who know their HIV status and percentage of positive women and exposed babies who access Nevirapine. Oct 07 – Aug 08.

	Elim	Siloam	Malamulela	Makhado	Tshilidzini	Nkensani	All
% of Mothers in labour with known HIV status	47%	52%	68%	62%	70%	85%	65%
% known pos Mothers received NVP	97%	57%	80%	174%	101%	84%	96%
% Babies NVP	154%	109%	91%	100%	96%	96%	104%

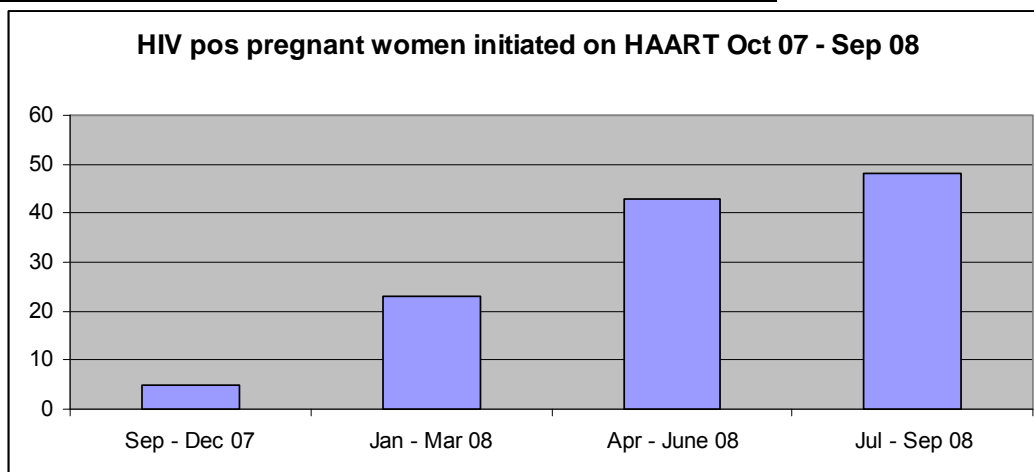
Figure 4: Percentage of women who know their HIV status



**PREGNANT WOMEN ON HAART**

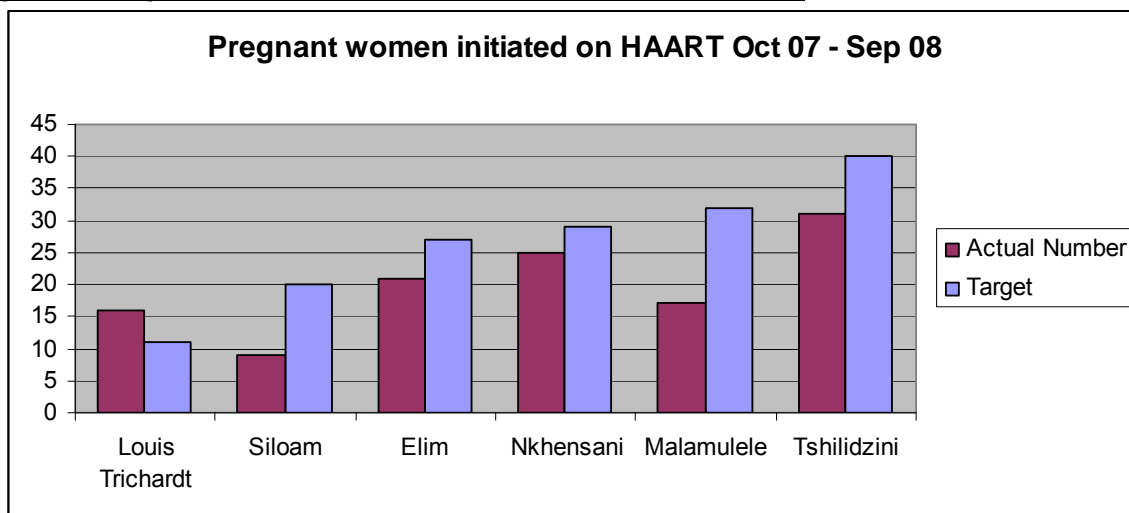
- Five hospitals began initiating pregnant women on HAART from the high risk antenatal clinic.
- The training programme was well received but as it was only conducted in June, the full impact of the training is still to be felt.
- Five hospitals commenced documenting the number of pregnant women initiated on HAART. Data for Elim was obtained from the Pharmaceutical services as the ARV service did not have this information.
- Figure 5 demonstrates a dramatic increase in the number of pregnant women initiated on HAART from 5 in the first quarter to 48 in the last quarter.

**Figure 5: Quarterly initiation of pregnant women on HAART, 6 hospitals (Elim, Makhado, Nkensani, Malamulela, Tshilidzini, Silloam) Oct 07 – Sep 08**



- 118 pregnant women were initiated on HAART from October 2007 – September 2008. This is 75% of the target we had set, but given that the training was postponed to June 08 to await the implementation of the revised PMTCT guidelines, and the quarterly increase in the number of women on HAART we are happy that the service is well on track to provide HAART for all eligible pregnant women.

Figure 6: Pregnant women initiated on HAART Oct 07 – Sep 08.



Source: Data from ARV and High risk clinics. For Elim Pharmaceutical service data

#### LESSONS LEARNED AND RECOMMENDATIONS

The project demonstrated that careful thought should go into the implementation of HIV services for mothers and children, and that these should be part of the normal maternal and child health services, rather than part of vertical HIV service.

The planned introduction of HAART in primary health care facilities is eagerly awaited, as pregnant women who require HAART will have closer access. Only those patients who are identified as “high risk” will need to be referred to the high risk clinic. Until then the initiation of HAART in pregnant women in High Risk Antenatal clinics is to be recommended in all hospitals throughout the country.

The provincial Department of Health sent out a circular indicated that the HIV status should be documented on all official patient records. This is welcomed as it removes the biggest barrier to care, which is not knowing that the woman is HIV positive and requires specific care. More effort is needed to communicate the circular to all role players.

# OBJECTIVE THREE: INCREASING CHILDRENS ACCESS TO HIV CARE AND TREATMENT

The project targeted the initiation of 230 new children onto ARV in the six hospitals over a 1 year period.

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## SITUATION ASSESSMENT:

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- Children were managed in adult ARV clinics, often by doctors that do not usually manage children. Some hospitals had a paediatric ARV service as part of paediatrics, but this was transferred to the adult service when one of the NGO's commenced assistance with staffing of the ARV clinic.
- Although it is thought that in excess of 50% of patients admitted to the paediatric ward were HIV positive, routinely testing high risk children, such as infants, children with pneumonia, diarrhoea, malnutrition and other infections were not practiced.
- When a doctor requested an HIV test, he / she had to wait for the patient to be counseled and often did not get given a written result. This was compromising the care of many children.
- The turn around time for PCR test was 4 – 8 weeks, which negatively impacted on the management of patients, with children dying before HAART is initiated, or being discharged to come back for the result.
- Initiation of children on HAART commenced in 2005 at Siloam Hospital and during 2006 all the other hospitals. It was difficult to ascertain from the ARV clinics the number of patients previously initiated on HAART. Official data show 107 children initiated on treatment in the 6 hospitals up until September 2007. Provincial Pharmaceutical data indicate 260 children collecting treatment from these 6 hospitals each month by September 2007.

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## IMPROVEMENTS AND INNOVATIONS

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- Staff in paediatric wards are counseling and testing many more patients and are encouraged to proceed with CD4 counts, viral loads and other baseline tests, counsel on adherence and initiate patients on HAART even while still admitted to the ward.
- ARV clinics have a separate day where they consult paediatric patients. This is still part of the ARV clinic as not all hospitals have a dedicated paediatric OPD.
- The HIV status is now documented in the official patient record.
- The postnatal ward staff are encouraged to document HIV exposed on the Road to Health Chart under "Reasons for Special Care" and indicate that the baby will need a PCR test and Cotrimoxazole at 6 weeks.

- Where it is not certain that the child may have a PCR test performed at the clinic, some hospitals have initiated follow up clinics for PCR tests. While ARV services are in the hospital this may facilitate early initiation onto HAART should the test be positive.

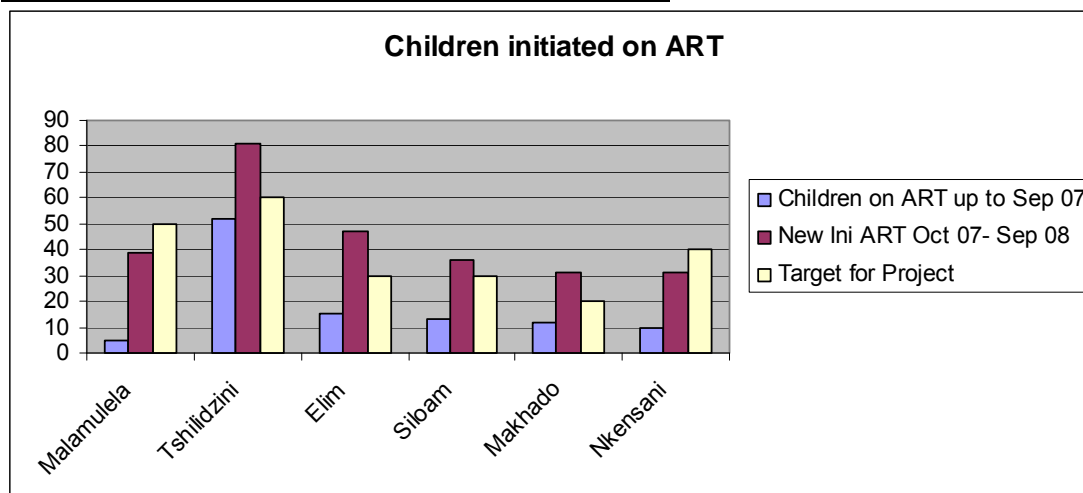
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#### OUTPUT

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265 children were newly initiated on HAART from October 07 – September 08. Four hospitals exceeded the targets.

Table 4: Children initiated on ART Oct 07 – Sep 08.



#### LESSONS LEARNED AND RECOMMENDATIONS

- There are still missed opportunities in the health service for HIV identification and care of children. Documenting the HIV status clearly in the patient record and on the Road to Health Chart will facilitate care.
- The introduction of early infant testing and the anticipate introduction of HAART for all positive infants (after the results of the CHER study) is now feasible. This will dramatically decrease the excess mortality in young infants and the ongoing morbidity of children with HIV.
- The integration of HIV care into maternal and paediatric care will result in more children accessing care. More work needs to be done on this integration in all the facilities. This is especially important as more infants will require ARV care.

# OBJECTIVE 4: COORDINATION, LIAISON AND ADVOCACY WITH KEY STAKEHOLDERS

A key objective of the project was to ensure that we networked with stakeholders in the health service and community. This was to facilitate identification, care and support for HIV positive pregnant women, mothers and children.

## NGO and CBO's

The Centre for Positive Care (CPC) in Thohoyandou is responsible for all lay counsellor training, placement and support in the Vhembe District. A good relationship was built with CPC and the counsellors. Counsellors were mentored when counselling mothers and children. The project also assisted them in following up patients and initiating support groups for pregnant women.

Many orphans and vulnerable children are found in the drop in centres in the community. There is no formal link with them and the health services, and some reported difficulty in accessing care and treatment as the legal documentation of the guardian or the centre were not yet in place. Assistance was given to two centres which included help with registration, testing of all children, and access to care. In one drop in centre all children tested negative and in the other centre 10 of 29 children were HIV positive. Nine of the children have been initiated on HAART and are showing great improvement in their health.

## Provincial and National NGO's

Networking with our partners is ongoing in order to advocate for care of children and mothers. Our partner organisation Wits Paediatric HIV clinics provided orientation for staff members, and ongoing monthly educational sessions. They and RHRU assisted with the maternity care training course.

Khutso Khurula an NGO based in Mopani District supports all primary health care clinics and some hospitals in comprehensive HIV prevention care and treatment. We network with them and have assisted them with training.

The Foundation for Professional Development (FPD) supports the ARV clinics in all the Vhembe Hospitals. We have worked closely with them to increase care for children and mothers. They have now appointed a Paediatrician to support the Paediatric ARV clinics in the Vhembe District. We are also very grateful to FPD, who have pledged us funding so that we can continue the work of the ECHO teams from April 2009. They will also take forward the Maternal HIV care training, and assist with a one day update in Paediatric HIV and TB care for primary health care.

## Limpopo Provincial Department of Health

The Department of Paediatrics and Child Health has a long association with the Department of Health and a mandate to provide technical support in Paediatrics and Child Health at all levels of the health service in Limpopo. Our department works closely with the Maternal and Child Health Directorate and the HIV and AIDS directorate. Formal meetings have included quarterly coordinating meeting of the ECHO teams, combined MCWH and HIV technical meetings and the Quarterly Provincial CCMT Steering committee meeting. The relationship with the department has resulted in findings and recommendations emanating from the project taken forward. Some of the outputs have included

- Development and implementation of a 5 day IMCI training course for Enrolled nurses. This has enabled enrolled nurses to competently consult well children and identify high risk children for further care.
- Clarification of the HIV testing and documentation process with the distribution of a circular to all health facilities, mandating health workers to document the results of the HIV tests in the official patient records.
- Development and Distribution of an Antenatal care register, Follow up register for infants and PMTCT protocols

# GOOD NEWS STORIES

There have been a number of important achievements that need to be especially highlighted both for Limpopo province and for South Africa's response to HIV and AIDS.

- Almost 95% of pregnant women were tested for HIV, the test results can now be adequately documented, paving the way to care for the mother and child.
- A clear demonstration that incorporating HIV care including the initiation of HAART into antenatal care is possible and a more successful model of care, as many more mothers were initiated on HAART in this setting. This important aspect of PMTCT, impacting also on breast feeding transmission, has been inadequately implemented and monitored and needs urgent attention at all sites in Limpopo.
- More than 90% of HIV exposed infants had a specimen taken for HIV DNA PCR at 6 weeks, paving the way for the implementation of EARLY treatment for infected infants. This will have a large impact on reducing mortality and morbidity in children.
- Networking with community organisations assists in finding orphans and vulnerable children in need of care and support, and provides additional support for patients.
- A close partnership with government and all stakeholders is essential to identifying and overcoming barriers to care.
- Health workers are enthusiastic and committed to caring for mothers and children with HIV, but need clear messages, guidelines and leadership.

# RECOMMENDATIONS AND FUTURE PLANS

This project has laid the foundation for ongoing work in order to achieve our goal of reducing mother to child transmission to less than five percent (including through breast feeding), initiating all positive infants on care and providing comprehensive care for mothers and children.

It is our belief that in Limpopo we will be able to achieve the Millennium Development goal of a two thirds reduction in under five mortality by 2015. To achieve this we need to take the PMTCT programme to scale. We are on the way to achieving this, and are also working on newborn care and other priority childhood illnesses.

Our recommendations for continued work and support are as follows

## ***INTEGRATION OF HIV INTO MATERNAL AND CHILD SERVICES.***

Continued support for the integration of HIV care into maternal and child health services, but with adequate resources, training, leadership and monitoring.

## ***DISTRICT HEALTH SERVICES MODEL OF SERVICE***

Comprehensive care of mothers and children require a functional district health service, as patients are referred between facilities and many aspects of the system are dependent on each other. Regular links and liaison are essential. Clinical managers and community liaison officers need to show leadership and monitor and support the service. Future project must support management in this role.

## ***HEALTH SYSTEM SUPPORT***

A fully functional health system is essential for effective interventions. Continued support and monitoring is needed in the following areas

- Testing and adjusting the Antenatal care register and register for children with special needs, to ensure that it fulfils the intention of facilitating both efficient patient management and effective monitoring of the service.
- The turnaround time of CD4 and PCR tests is a concern. PCR testing in the province may be a solution to the problem.

## ***CLINICAL LEADERSHIP***

Clinical leadership in implementing services including revised or new guidelines are required. Training should play a supportive role but is not key to implementation, especially when changes are relatively minor. Grooming the managers and senior clinicians to do on-site mentoring can be more effective than training, as full implementation at each site does not need to wait for everyone to be trained; it is a stepwise process of working together on the content and the system.

## ***HAART FOR PREGNANT WOMEN***

There is urgency in ensuring that pregnant women who are eligible for HAART access this service in pregnancy and beyond, as the mother and infant will benefit. This may also protect the infant from breast feeding transmission. Scaling up to all hospitals in the province is urgent. At the same time the implementation of nurse initiated ART at primary health care

facilities also needs support and scaling up, as this is probably the best place for most pregnant women and children to access care

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#### **FUTURE PLANS**

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The Team that worked in Vhembe are now being supported by Wits ECHO until March 2009. They are working in Capricorn and Sekhukhune municipalities in similar ways.

The Department of Paediatrics is in the process of securing further funds to continue the work of both teams from April 2009. We will continue to support the province in finding innovative ways to reach our combined goals for the care of pregnant women, mothers and children.

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#### **Acknowledgment**

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Wits ECHO in Johannesburg and Polokwane that supported and worked with the team  
My colleagues in the Department of Paediatrics who value prevention and proactive care

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**ANNEXURE 1: DATA COLLECTED FROM PRIMARY HEALTH CARE FACILITIES IN VHEMBE SEP 07 – AUG 08**

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	Madombidza	Malamulela	THC	Madimbo	Phiphidi	Shayandima	Kulani	Kutama	Vleifontein	Phananani	Tshiva	LT	TOTAL
First ANC Visits	690	694	685	332	235	353	254	219	123	259	220	184	4248
Subs ANC Visits	89	123	183	10	99	32	62	61	26	4	78	62	829
No. Counseled	707	666	865	301	313	385	326	271	144	216	298	246	4738
No. Tested	643	576	815	293	311	336	326	204	130	142	207	228	4211
Percentage tested	91%	86%	94%	97%	99%	87%	100%	75%	90%	66%	69%	93%	89%
HIV Positive	96	69	74	42	64	47	47	25	14	10	39	39	566
Percentage positive	15%	12%	9%	14%	21%	14%	14%	12%	11%	7%	19%	17%	13%
HIV Negative	547	512	737	251	247	289	267	179	118	132	168	189	3636
Refused Testing	68	88	50	8	2	49	0	67	14	74	91	18	529
Maternal CD4 Test	97	68	75	34	24	44	49	30	11	10	39	39	520
Percentage CD4	101%	99%	101%	81%	38%	94%	104%	120%	79%	100%	100%	100%	92%
CD4 ≤ 350	36	16	28	7	9	15	16	10	11	2	14	12	176
Percentage CD4 < 350	37%	24%	37%	21%	38%	34%	33%	33%	100%	20%	36%	31%	34%
Prophylaxis 28 weeks	42	36	28	26	16	24	25	23	11	8	20	27	286
Women referred for HAART	8	6	8	5	12	13	2	7	6	0	2	0	69
Prophylaxis initiated in Labour	6	0	2	0	2	3	0	0	0	0	2	0	15
Infants who received Prophyla	28	16	4	20	9	12	0	14	6	0	8	0	117

	Madombidza	Malamulela	THC	Madimbo	Phiphidi	Shayandima	Kulani	Kutama	Vleifontein	Phananani	Tshiva	LT	TOTAL
DNA PCR Done	68	45	69	36	31	54	95	39	19	5	28	12	501
Percentage DNA PCR	71%	65%	93%	86%	48%	115%	202%	156%	136%	50%	72%	31%	89%
Positive PCR	1	7	5	4	7	1	12	3	0	1	3	1	45
Negative PCR	50	35	55	31	23	44	72	28	22	1	21	8	390
Pending PCR	60	9	49	26	6	85	27	27	12	2	14	6	323
Infant CD4 Tests	0	4	4	4	6	1	4	3	0	0	1	0	27
Infants < 18 months referred for HAART	1	6	2	3	7	0	2	3	0	1	1	0	26
HIV Tests for children ≥ 18 m	20	13	33	28	43	50	16	20	18	9	13	15	278
HIV Positive	1	1	3	4	7	6	1	1	7	3	1	1	36
HIV Negative	16	10	30	24	36	44	14	14	11	6	12	14	231
CD4 Done	1	1	3	6	7	6	1	1	7	3	1	1	38
Children ≥ 18 m refer HAART	0	3	1	6	9	1	1	1	7	3	1	1	34

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**ANNEXURE 2: BASELINE DATA TO ESTABLISH TARGETS FOR ARV TREATMENT IN MOTHERS AND CHILDREN**

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Hospital	Expected No. of Deliveries	Actual deliveries Oct 07 - Aug 08		Expected No. of Women eligible for HAART[2]	Target, number of pregnant women on HAART for 2008	Actual number on treatment	Expected kids < 1 eligible for HIV Care	Expected < 15 eligible for ARV	Actual number on treatment 2007	Target: newly initiated on HAART 2008	Actual newly initiated Oct 07 - Sep 08
Malamulele	4000	2939	400	80	32	17	60	300	5	50	39
Tshilidzini	5000	4594	500	100	40	31	75	375	52	60	81
Elim	3300	3086	330	67	27	21	50	250	15	30	47
Siloam	2500	2319	250	50	20	9	38	190	13	30	36
Louis Trichardt	1342	1208	134	27	11	16	20	100	12	20	31
Nkhensani	3600	3238	360	72	29	25	54	270	10	40	31
<i>Messina</i>	<i>1320</i>	-	<i>132</i>	<i>26</i>	<i>10</i>	-	<i>20</i>	<i>100</i>	<i>14</i>	<i>20</i>	-
<i>Donald Fraser</i>	<i>3000</i>	-	<i>300</i>	<i>60</i>	<i>24</i>	-	<i>45</i>	<i>225</i>	<i>49</i>	<i>50</i>	-
<b>Total</b>	<b>24062</b>	<b>17384</b>	<b>2406</b>	<b>481</b>	192	<b>119</b>	<b>362</b>	<b>1810</b>	<b>170</b>	300	<b>265</b>

[1] Assumption that the average HIV prevalence in Vhembe district is 10% was made.

[2] Assumption that 20% of HIV positive pregnant women are eligible for HAART was made.

[3] Assumption that the risk of HIV transmission will be reduced by half to 15% was made.

(4) x 15 x 20% still alive

**ANNEXURE 3: HOSPITAL PMTCT AND ARV DATA OCT 07 – SEPTEMBER 08**

	Elim	Siloam	Malamulela	Makhado	Tshilidzini	Nkhensani	All
Number of deliveries	3086	2319	2939	1119	4594	3238	17295
Number of HIV Positive Clients	194	139	220	154	362	473	1542
Number of HIV Negative Clients	1242	1065	1779	542	2831	2270	9729
Number of Clients with Unknown HIV Status	356	777	791	147	1246	419	3736
Number on Prophylaxis [Nevirapine]	125	69	134	154	271	328	1081
Number of clients initiated on Prophylaxis during Labour [Nevirapine]	63	10	43	114	94	69	393
Number of clients on HAART on admission to Labour ward	20	2	5	29	31	21	108
Number of Infants who received Prophylaxis [Nevirapine]	298	152	201	154	346	456	1607
% with Known HIV status in Labour	47%	52%	68%	62%	70%	85%	65%
% with Unkwown status In Labour	53%	48%	32%	38%	30%	15%	35%
% known pos Mothers received NVP	97%	57%	80%	174%	101%	84%	96%
% Babies NVP	154%	109%	91%	100%	96%	96%	104%